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The effects of team teaching and self-contained classes on pupil adjustment were compared. The study was conducted over a period of two school years; the sample was composed of elementary pupils from two schools in an economically depressed area. Pupils were randomly assigned at one school to either a team organization or a self-contained clasroom. The other school served as a second control and continued the self-contained classroom approach. The second control was included to detect possible contamination of variables and to lend greater power to the statistical analyses.

The two different classroom organizations produced only minor differences in adjustment. In the first year, the group in team teaching made lower gains in adjustment than the groups in the self-contained classrooms. This difference did not persist in the second year. It was concluded that either there were no organizational effects on pupil adjustment, or the personality scales of the measuring instrument were not sensitive to such differences in adjustment. Background references and notes were included.

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A Comparison of Pupil Adjustment in Team and Self-Contained Organizations[1]

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A COMMON METHOD used in "evaluating" pupil adjustment in team teaching has been simply to ask the pupils if they enjoyed being taught by a team; usually sampled student opinion was highly favorable (3, 4, 5, 6, 7, 8). Crandell and Piel (9), on the other hand, report elementary pupils taught by an experimental team were nine percent higher than self-contained students in "school-related problems" on a pupil problem inventory. These subjective reports quite possibly could contain large errors due to the lack of necessary experimental controls.

Ploghoft (10) expresses concern that the team approach waters down a strong and healthy identification of the pupil with a single self-contained teacher, an identification not possible in a team setting. Heathers (11), on the other hand, feels that a pupil taught by a team has a choice in his selection of an appropriate identification figure. Lambert (12) states that most elementary school pupils benefit emotionally from having several teachers rather than one, although both he and Szabo (13), the latter working with high school pupils, note that a few students must be separated due to confusion or marked insecurity in the new setting.

For the most part, however, writers report no ill effects on the personality of pupils taught in team organizations or in large-class settings (3, 5, 14, 15, 16). Two of the references cited above (3, 14) are especially pertinent as they used the same standardized test as this study.

Method

Subjects

In the first year of this study the experimental population totaled 349 elementary school students, and in the second year, 381. Since the study was conducted for two years, quite naturally the number of pupils in particular classes changed slightly from month to month and year to year. Washington School, Madison, Wisconsin, housed 60 percent of these pupils while Longfellow School, also in Madison, enrolled the remaining 40 percent. Both schools are located in an economically depressed area of the city (i.e., 25 percent of the families are receiving aid under the Public Assistance Program, 60–70 percent of the fathers are working in unskilled or semi-skilled occupations, etc.).

Design

The experimental design randomly assigned pupils from Washington School either to a team or a self-contained organization. Within the team organization, two multi-grade teams were formed. These teams corresponded to grades 1–3 and 4–6, and are referred to as the Primary and Intermediate Teams, respectively. Each team had five members: a team leader, a regular teacher, two graduate teacher-interns, and a half-time instructional secretary. Its cost was comparable to three regular self-contained teachers' salaries.

The Washington Self-Contained Organization continued a modified self-contained approach. The traditional self-contained classroom procedure was altered to the extent of providing specialists in the fields of music, art, and physical education. This section of Washington School contained one class at each grade (1–6).

Longfellow School, the second control organization, continued a self-contained approach. It was included in the Project to detect possible contamination of variables at Washington School and to lend greater power to the statistical analyses. Table 1 gives the organizational design and approximate number of students in each class.

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TABLE 1.—APPROXIMATE DISTRIBUTION OF STUDENTS PARTICIPATING IN PERSONALITY ADJUSTMENT STUDY BY GRADE AND ORGANIZATION

Organization	Grade					
	1	2	3	4	5	6
Washington Team	Team Leader Regular Teacher Interns (2) 55 Pupils			Team Leader Regular Teacher Interns (2) 50 Pupils		
Washington Self-Contained	Teacher 20 Pupils	Teacher 15 Pupils	Teacher 20 Pupils	Teacher 20 Pupils	Teacher 20 Pupils	Teacher 15 Pupils
Longfellow Self-Contained	Teacher 35 Pupils	Teacher 25 Pupils	Teacher 25 Pupils	Teacher 25 Pupils	Teacher 25 Pupils	Teacher 30 Pupils

Procedure

The first year of the study, the *California Test of Personality* (17) was given both as a pre- and post-test in Oct., 1961, and May, 1962, using different forms of the test. Grades 1–3 took primary forms of the test while grades 4–6 took elementary forms. During the second year, the same test was given only as a post-test (May, 1963), since the pre-test was serving to cue both teachers and students that they were in an experiment.

These tests give two independent scores, personal adjustment and social adjustment. A third score, total adjustment, is derived by summing the two independent scores. Thus, three scores were available on the student for three different testing dates.

The first year, a single Analysis of Covariance for each of the three scores was run, using sex, grade, and organization as independent variables and pre-test as the covariate. Raw scores for the primary grades (1–3) were transformed to a scale comparable to the intermediate grades (4–6) by means of a standard score transformation.

The second year, Analyses of Variance were computed for each of the three scores using the same independent variables. However, second year personality scores were not transformed to a common scale and, therefore, separate analyses were undertaken for primary and intermediate levels. This resulted in six separate ANOVAs (three scores X two levels).

When a significant organizational effect was found, a Duncan Multiple Range Test was run to locate the exact comparison(s) causing the significant difference (18). Because of the unequal cell frequencies, it was necessary to refine the Multiple Range Test as outlined by Kramer (19).

Results

Academic Year 1961–62: First Through Sixth Grades

The Bi-md 14 computer program was used to compute separate Analyses of Covariance for personal adjustment, social adjustment, and total adjustment. The division of the analysis of covariance was 3 x 6 x 2 (three organizations by six grades by two sexes). Scores were available on 349 subjects. The F-ratios computed from the adjusted means are shown in Table 2.

TABLE 2.—F-RATIOS OF CALIFORNIA TEST OF PERSONALITY SCORES BY TYPE OF ADJUSTMENT AND SOURCE, 1961–62***

Source	df	Type of Adjustment		
		Personal	Social	Total
Organization	2	4.38*	1.56	2.99
Grade	5	1.74	2.15	1.91
Sex	1	—	4.03*	—
Org x Grade	10	2.27*	2.25*	2.51*
Org x Sex	2	—	—	—
Grade x Sex	5	2.73*	1.96	3.28**
Org x Grade x Sex	10	—	—	—
Error	312			
Covariate	1			
Total df	348			

*p<.05.
**p<.01.
***A dash indicates a F<1.

TABLE 3.—CALIFORNIA TEST OF PERSONALITY: PERSONAL ADJUSTMENT MEAN SCORES BY ORGANIZATION, 1961–62

Scores	Washington Team	Washington Self-Contained	Longfellow Self-Contained	Duncan Range		
				WT-WSC	WT-LSC	WSC-LSC*
Post-Test	49.79	51.71	53.35			
Pre-Test	49.16	48.50	48.40			
Gain	.63	3.21	4.95	2.74	2.67	2.55

*WT: Washington Team.
WSC: Washington Self-Contained.
LSC: Longfellow Self-Contained.

The significance of organization for personal adjustment scores was caused by the difference between the Washington Team and Longfellow Self-Contained Organizations. These scores are shown in Table 3; the Duncan Minimum Range estimates show the differences required between organizational means for significance. The difference in gain scores between the Washington School Organizations is 2.58, too small to be significant (a gap of 2.74 is needed as Table 3 shows). Likewise the difference between the two self-contained organizations' means is non-significant. However, Washington Team is significantly lower than Longfellow Self-Contained in personal adjustment for the difference in means is 4.32, greater than the gap of 2.67 required for significance.

The significance of sex for social adjustment came about when girls rose .61 in mean score between pre-and post-tests while boys rose only .20. Although this difference is statistically significant, it is of little practical significance because the difference is less than a single question. (For a full discussion of the significant interactions, see the Office of Education, U.S. Department of Health, Education, and Welfare report, Lambert, *et al.*, 20.)

Academic Year 1962–63: First Through Third Grades

Analyses of variance were computed separately on the primary and intermediate levels for each of the three scores. Therefore, the division of the analyses was 3 x 3 x 2 (three organizations by three grades by two sexes) rather than the 3 x 6 x 2 covariance analyses conducted the first year. The F-ratios obtained for grades 1–3 are given in Table 4 (total N = 197).

No organizational main effect was significant. The significant main effect for sex resulted when girls were significantly lower than boys in personal adjustment (means of 32.10 and 33.99, respectively).

Academic Year 1962–63: Fourth Through Sixth Grades

The F-ratios resulting from the analysis of intermediate level scores are given in Table 5 (total N = 184).

TABLE 4.—F-RATIOS OF CALIFORNIA TEST OF PERSONALITY SCORES ON THE PRIMARY LEVEL BY TYPE OF ADJUSTMENT AND SOURCE, 1962–63

Source	df	Type of Adjustment		
		Personal	Social	Total
Organization	2	—	—	—
Grade	2	—	—	—
Sex	1	4.28*	—	1.07
Org x Grade	4	—	1.21	—
Org x Sex	2	—	1.28	—
Grade x Sex	2	—	—	—
Org x Grade x Sex	4	—	—	—
Error	179			
Total df	196			

*p < .05.

TABLE 5.—F-RATIOS OF CALIFORNIA TEST OF PERSONALITY SCORES ON THE INTERMEDIATE LEVEL BY TYPE OF ADJUSTMENT AND SOURCE, 1962–63

Source	df	Type of Adjustment		
		Personal	Social	Total
Organization	2	—	—	—
Grade	2	1.09	—	—
Sex	1	—	7.28**	2.52
Org x Grade	4	1.11	1.82	1.72
Org x Sex	2	—	1.75	1.34
Grade x Sex	2	—	—	—
Org x Grade x Sex	4	—	1.84	1.44
Error	166			
Total df	183			

**p < .01.

As for the primary level, no organizational main effect was significant. Girls were significantly higher than boys in social adjustment on the intermediate level (means of 58.41 and 54.53, respectively).

Discussion

It seems clear that the two different classroom organizations produced only minor differences in adjustment as measured by the *California Test of Personality*. Only in personal adjustment scores of the first year was there a significant organizational main effect: the Team was lower than both Self-Contained organizations in gain in personal adjustment, and significantly lower than Longfellow Self-Contained.

This difference did not persist in the second year study. For the second year, the following means for personal adjustment were recorded:

Primary Level: WT: 33.23; WSC: 32.50; LSC: 33.20.

Intermediate Level: WT: 51.37; WSC: 52.88; LSC: 52.84

The fact that the difference did not persist casts some doubt as to the importance of the first year's significant difference.

One would have to conclude, therefore, that either there are no organizational (Team vs. Self-Contained) effects on pupil adjustment, or else the personality scales of the instrument used are not sensitive to such differences. The variation which occurred within organizations in personal and social adjustment scores may have been so great as to obscure between-organization effects.

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